WSR-88D DLOC Description

The DLOC is divided up into Instructional Components (ICs). Each of these ICs is a different module of training, with varying delivery methods. It is particularly important that students:

1. complete the ICs in the appropriate order.
2. complete each exam as soon as possible after finishing the IC(s) that the exam covers.
3. complete all the exams before attending the DLOC Workshop, which will serve as a “wrap-up” for the course.

Objectives

The individual ICs have written objectives that specify the material that the student is expected to know. Following the objectives for test preparation is the most effective way to succeed in the DLOC!

The following is the listing of each DLOC IC, with information on its content, delivery method, any prerequisites and expected completion time. There is also information on the exams, such as the type of exam, content (ICs) that each exam covers, as well as a completion schedule.

DLOC Orientation

The first step in completing the DLOC is attending the DLOC Orientation. This one-hour teletraining session gives both the student and their Training Officer a chance to meet their lead instructor and offers an overview of the course. Since DLOC Orientation is not part of the actual instructional material, it does not have an IC number assigned to it.

Delivery Method	Prerequisite	Expected Completion Time
Teletraining	None	1 hour

IC 5.1 “Radar Applications Using AWIPS”

Delivery Method	Prerequisite	Expected Completion Time
The Web	DLOC Orientation	22 hours

This set of “job sheets” describes the basic functionality and characteristics of using radar products on the AWIPS workstation.

AWIPS Radar Proficiency Exam

The AWIPS Radar Proficiency Exam covers the material from IC 5.1. It will be administered by the student’s Training Officer. Students complete a series of tasks at the AWIPS workstation to demonstrate proficiency at displaying and manipulating radar data.

IC 5.2 “Introduction to the WSR-88D”

Delivery Method	Prerequisite	Expected Completion Time
The Web	None	2 hours

An overall WSR-88D system description is provided, covering the equipment groups (RDA, Wideband Communications, RPG, and Users) and their primary subcomponents.

Precursor: IC 5.3 “Principles of Meteorological Doppler Radar”

Delivery Method	Prerequisite	Expected Completion Time
The Web	IC 5.1 and 5.2	2 hours

This precursor module lays a foundation for IC 5.3, which is the first lengthy instructor led portion of the course. Fundamental radar concepts such as beam structure and refractions, range folding and beam filling are pre-

sented. Additionally, concepts specific to the WSR-88D are covered, such as the various Volume Coverage Patterns that are employed.

IC 5.3 “Principles of Meteorological Doppler Radar”

Delivery Method	Prerequisite	Expected Completion Time
Teletraining	IC 5.3 Precursor	9 hours

This module is delivered in three 3-hour teletraining sessions which are taught on three consecutive days. Topics covered are Precipitation Estimation, Signal Processing, Base Data Generation, and Mitigation of Data Ambiguities.

Written Exam 1

This is a multiple choice exam covering IC 5.2, the IC 5.3 Precursor, and IC 5.3. ***Students are strongly encouraged to complete this exam before moving on to IC 5.4!***

IC 5.4 “Base Products and Velocity Interpretation”

Delivery Method	Prerequisite	Expected Completion Time
Teletraining	IC 5.3	4 hours

This IC is taught in two 2-hour teletraining sessions which are delivered on two consecutive days. This will describe the suite of Base Products and their applications, as well as methods of interpreting large and small scale velocity patterns, and horizontal discontinuities (e.g.fronts).

IC 5.5 “Derived Products”

Delivery Method	Prerequisite	Expected Completion Time
Teletraining	IC 5.4	9 hours

This is the final module that is delivered by teletraining. It will present the suite of Derived Products and their applications. Derived Products will also present relevant information on the algorithms that generate the various products and displays. This IC is taught in three 3-hour teletraining sessions on three consecutive days.

Written Exam 2

This is a multiple choice exam covering IC 5.4 and IC 5.5. ***Students are strongly encouraged to complete this exam before moving on to IC 5.6!***

IC 5.6 “System Operations / UCP Control”

Delivery Method	Prerequisite	Expected Completion Time
CD-ROM	IC 5.2 (however, completion of ICs 5.3, 5.4 and 5.5 is encouraged)	10 hours

This module provides an understanding of overall WSR-88D operations and basic familiarization of the Unit Control Position (UCP).

Written Exam 3

This is a multiple choice exam covering IC 5.6. ***Students are strongly encouraged to complete this exam before moving on to IC 5.7!***

IC 5.7 COMET Convective Series

Delivery Method	Prerequisite	Expected Completion Time
CD-ROM	None	28 hours

The CD-ROMs that comprise this IC are produced by COMET. They are

- "Anticipating Convective Storm Structure and Evolution" (10 hours)
- "A Convective Storm Matrix: Buoyancy/Shear Dependencies" (4 hours)
- "An MCS Matrix Including Mesoscale Convective Systems: Squall Lines and Bow Echoes" (14 hours)

This set describes fundamental relationships of convective parameters such as buoyancy, vertical wind shear and cold pools, and their influences on storm organization and evolution.

Written Exam 4

This is a multiple choice exam covering IC 5.7. ***Students are strongly encouraged to complete this exam before moving on to IC 5.8!***

IC 5.8 "DLOC Workshop"

Delivery Method	Prerequisite	Expected Completion Time
Residence	Completion of all Course exams. This is very important. Students will not receive a course certificate at the workshop if they have not completed all of the exams.	28 hours

This workshop is designed to culminate all the materials from the DLOC. Topics include:

1. Identification of severe thunderstorm features using radar and integrated sensor techniques.
2. Mesocyclone and TVS recognition, radar detection of large hail, sampling considerations, and winter weather applications.
3. Discussion of Warning Decision Making issues, along with student participation in simulated real-time scenarios of severe weather cases.
4. WSR-88D optimization and future evolution.